
FOOD SHORTAGE IN INDIA



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By

Shri Krishna Srivastava

Head of the Economics Deptt.

M. M. H. (Degree) College,

GHAZIABAD (U. P.)



—:Published by:—
Mohini Kala Press,
Ghaziabad.

2000]

1952

Price. —/10/—

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PREFACE

India has been facing serious food shortage for the last eight years. After the Bengal Famine of 1943-44, several regions are again threatened with the dire consequences of draught and famine. This small booklet aims at presenting the all-perplexing food problem in a non-technical language and simple and clear style. Appropriate headings, references and a bibliography of 37 books have been arranged to facilitate the study of this burning topic of the day. The Grow More Food Scheme, Five Year Plan and Population Planning are fully discussed to acquaint the readers with recent tendencies and modern developments taking place in this direction. Besides the Government of India Publications and other authoritative works, upto-date facts and figures have been quoted from news papers.

I hope this booklet would prove useful to all those who are interested in the problem of food shortage in India.

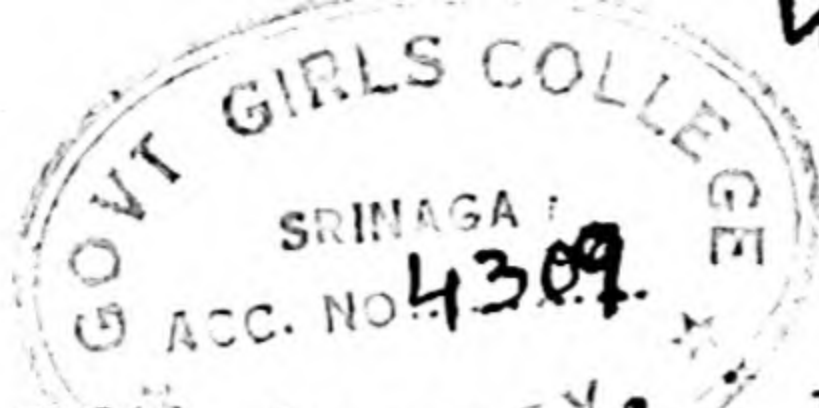
Thanks are due to Principal B. S. Mathur for his kind words of encouragement and valuable suggestions.

M. M. H. (Degree) College,

Ghaziabad.

Shri Krishna Srivastava

10th, Feb. 1952



Food Shortage in India

Introduction:—

It is a great pity that India being predominantly an agricultural country is not able to feed her people and has been facing serious food shortage since long. The problem of food supply which has been baffling the brains of Indian economists and politicians is of paramount importance as it has impeded other progressive schemes of national benefit. Malnutrition, starvation and occasional famines have been more or less endemic under Indian economic conditions. In the nineteenth century there occurred 31 famines of which 18 occurred in its last quarter. It has been authoritatively estimated that about 32.4 million people died under the impact of famines.¹ Famines that occurred in the last century were not actually due to actual shortage of food in our country but to a major part, to the lack of transport facilities owing to which supplies could not be moved. Even today Indian agricul-

ture is greatly dependent on the extent and distribution of rainfall as about 20% of the net area sown is provided with irrigation facilities. Hence regional shortages of food are very frequent in this country.

Towards the end of the last century it was hoped that with the increased transport facilities and agricultural improvements under the stimulus of state aid, dangers of famines, droughts and under nutrition would be eradicated although the Famine Commission of 1880 had sounded a note of warning that excessive pressure of population on land was resulting in inefficient cultivation and lower per capita availability of food. But at the same time the Commission reported an annual surplus of 5 million tons of food grains in India- the production of food grains was placed at 52 million tons and the consumption at 47 million tons.²

Food Production In India.

Since 1939 the internal production of food grains in India has remained somewhat stationary as evident from the following table.

2. Agricultural Situation in India Aug. 1951 Page 351.

3. Currency and Finance Report, 1949-50

Year	Production of food grains in thousand tons.
1939	40898
1940	42764
1941	41891
1942	40634
1943	44224
1944	45441
1945	46093
1946	40768
1947	42069
1948	44393
1949	44260
1950	45841

Food Imports.

The Famine Commission 1945 observed, "During the five years ending 1941-42, the average annual net imports amounted to about 10 lakh tons.*

The following table will give the readers an accurate idea about food imports into India.⁵

4. Famine Commission Report 1945 Page 51.

5. C. N. Vakil-Economic Consequences of the Partition Page 165

Year	Thousand tons.	valued at Rs. in crores
1944	649	13.0
1945	850	20.4
1946	2250	70.1
1947	2330	98.7
1948	2840	129.5
1949	3700	148.0
1950
upto July 27, 1951	2475.148	...

On account of poor crops the shortage of food grains amounted to 75 lakh tons in 1946 which meant that there was no food for 6 crores of people. Government of India have been spending large amounts of money on food imports as is evident from the above table. From the 1st. of January 1951 to the 27th. July 1951, 2475148 tons of food grains have been imported from ten food exporting countries in the World. U.S.A. alone is supplying 2 million tons of wheat.

Food Shortage.

In 1914 the Prices Enquiry Committee reported that food requirements increased in larger

proportions than its supply, From this time onward the celebrated Malthusian theory of population seems to have overtaken India and the equilibrium between population and food supply was disturbed. India became an importer country to the tune of $1\frac{1}{2}$ to 2 million tons annually. Some time ago Dr. Radha Kamal Mukherjee estimated that India was deficient in food by 12 percent.⁸ It clearly meant that India produced food for 88 persons per hundred and for the rest imports were needed. This situation was further aggravated during the Bengal Famine (1943-44) in which according to the conservative report about 1.5 million people died of starvation.

In 1943, although the Government of India realised the economic necessity of stopping all exports of food grains yet from April 1945 to November 1945 no less than 42860 tons of rice were exported.

7. Dr. K. K. Dewett-Indian Economics Page 219
edition 1951

8. Dr. R. K. Mukherjee- Food Planning for 400
Millions.

This export deteriorated the situation still further and the policy of the Government was severely criticised by all interested in the economic prosperity of India.

If the present rate of population increase is maintained, the present deficit of 5.3 million tons will increase to 7.3 million tons, to 9.9 million tons and to 12.6 million tons after every five years.⁹ It is clear from the statement of Shri K. M. Munshi, the Union Food and Agriculture Minister that next year we may require about 7 million tons due to failure of rains in most parts of India. Recent drought and famine conditions have magnified the proportions of menace and sufferings unprecedented in the economic history of our country. About 1000 square miles-belt in Rajasthan is enveloped by this ghastly drought. Saurashtra and Gujrat have been threatened with the dire consequences of food shortage. In the Eastern part of Uttar Pradesh, according to a recent report, about 1.85 crores of people have been affected by failure of rains. The situation was so grave

⁹. Eastern Economist August 1949- Page 1233

that the State Government convened an emergency conference of all the Food Officers of the Districts on November 25 and 26, 1951 to consider the ways and means of solving this difficult problem.

According to Dr. B. Natarajan, Economic Advisor to the Government of Madras, this State has been continuously deficit in food production for the last two centuries.¹⁰

Food shortage has been a mystery to some people in India. Even the late Mahatma Gandhi thought that food scarcity was created by controls. But when he travelled Assam and Bengal, he realised that food shortage was a reality. In *Food Shortage and Agriculture* he writes, "During my wanderings in Bengal, Assam and Madras I heard tales of distress due to shortage of food. Reports come to me from other parts of India. They support the same view."¹¹

Nutrition

The problem of nutrition must also engage the attention of the Government and the

10. Dr. B. Natarajan—*Food and Agriculture in Madras State* Page 1.

11. Mahatma Gandhi *Food Shortage and Agriculture*.

public. According to the report of the Enquiry conducted by Sir John Megaw "only 39% people were adequately nourished, 41% poorly nourished and 20% very badly nourished."¹² The authoritative statement of Dr. Aykroyd is that "ninety five percent of the population cannot afford the balanced diet."¹³

Dr. Baljit Singh, Reader in Economics, Lucknow University wrote in 1947 that "on the basis of the population of 1946, 33414600 crore calories were required for annual consumption— a person consuming 2800 calories per day. Total supply of calories was 2620000 crores. Thus food shortage was estimated at 7214000 crore calories per year. i.e. about 21.6 % of the total requirement."¹⁴

According to the above calculation an Indian consumed only 2800 calories per-day whereas an American consumed 3300 calories per day, an Englishman 3000, a Danish, a Norwegian,

12. Sir John Megaw- Enquiry RePort 1940.

13. S. Y. Krishna Swami-Rural problem in Madras Page 101.

14. Dr. Baljit Singh-Population and Food Planning Page 101.

and a Czechoslovak 2400 calories each.¹⁵ Professor Atwater, an American authority, considers that an average man, at moderate muscular work requires 3500 calories per day.¹⁶ In the rationed towns in India, daily ration of 1200 calories per day per adult is supplied when the amount of ration is 12 oz. per adult.

“Much ill-health, disease and mortality in India, particularly among infants, children and women in the child bearing period, is due to malnutrition. Diseases caused by or associated with insufficiency of some food factor or factors in the diet are of common occurrence.”¹⁷

The low level of nutrition in India is reflected in exceedingly low expectation of life, the average age of males in India being 26.91 years, In U. S. A. it is 63.65 years, in New Zealand 65.46 years, in Australia 63.48 years, in Switzerland 60.7 years, in Sweden 64.3 years, in United Kingdom 60.18 years, in

15. Dr. Baljit Singh-Population and Food Planning
Page 104

16. Dr. P. P. Pillai- Economic Conditions in India
Page 72.

17. Jathar and Beri- Indian Economics Vol I Page 455.

Germany 59.86 years, and France 54.3 years.

Whereas the average age of females in India is 26.56 years, in U. S. A. it is 68.61 years, in Denmark 65.8 years, in U. K. 64.4 years, in Sweden 66.92 years in Switzerland 64.6 years, in Australia 67.14 years and in New-Zealand it is 68.45 years.¹⁸

Causes of Food Shortage.

Certain potent causes are responsible for this acute problem of food shortage. In 1937 Burma was politically and economically separated from India, curtailing supplies of rice and increasing difficulties for Indians. In 1947 the most fertile wheat growing tract of the Punjab went over to Pakistan. This aggravated the situation still further. "The separation of Burma reduced internal supplies of food grains by 1.3 million tons, the partition in 1947 by a further .77 million tons. The lesson of the Bengal Famine and, even more, of recent events, is that India's Food Problem is not a temporary disequilibrium between supply and demand. It is a manifesta-

tion of the continually growing pressure of population on land”¹⁹

Regarding food deficit due to partition Dr. K. K. Sharma observes, “The food deficit of India has been increased by the partition of the country. Sind used to supply rice to the provinces in India to the extent of 150000 tons per year. Punjab and Sind used to supply wheat to the deficit provinces of India to the extent of 500000 to 700000 tons a year. Pakistan has a surplus of 5 to 7 hundred thousand tons of wheat.”²⁰

The Indian Government and the cultivators never thought of applying modern scientific methods of agricultural production. No programme of economic self sufficiency was ever conceived in this country. Population went on increasing and the food supply remained more or less stationary. The area under food grains during 1930-40 increased by 1.5 percent, the production declined by about 4 percent, but the population increased by

19. Five Year Plan—Page 67.

20. Dr. K. K. Sharma- Evolution of Indian Economy
Page 103.

more than 15 percent.²¹ Famines and drought conditions deteriorated the much bemoaned economic jeopardy.

Food Self-Sufficiency.

In any scheme of National Planning, Food Self Sufficiency must enjoy top priority. Acharya Vinoba Bhave differs from the views of the National Planning Committee. On the 23rd November 1951, he said at Raj Ghat that the Nation should have kept its pledge for not importing any food grains after March 31, 1952. The N. P. C. had recommended an import of 30 lakh tons per year for an indefinite period which did not appeal to him. He suggested that another deadline should be established after which date food grains must not be imported under any circumstance and, within that time the country must achieve self sufficiency in food.²²

Addressing the delegates from the member countries, at the Food Conference held in Rome under the auspices of the United

21. Nanavati and Anjaria- The Indian Rural Problem
Page 61.

22. Amrit Bazar Patrika dated November 25, 1951

Nations Food and Agriculture Organisation Mr. Norris Dodd, Director General of the F. A. O. said on November 22, 1951 that they did not fulfil their obligations which they accepted 6 years ago. He asked them to set an overall world target of increased agricultural output for the next five or ten years. Speaking on the same occasion India's Food and Agriculture Minister Shri K. M. Munshi said that in most cases the collective aid, although comparatively very small, was often available only after overcoming many technical obstacles. The F. A. O. should assume common responsibility to meet the primary wants of the hungry millions.

Need for Imports.

India thus has a three fold need for food imports. (a) To balance shortage in yearly production.

(b) To make up the normal shortage for subsistence and (c) To maintain a grain reserve as a means of providing insurance against famines and scarcities.

Measures adopted.

In order to cope with this horrifying and

troubulous situation the Government of India created a Food Department in 1942 with four aims (a) Control of food prices (b) distribution of food stuffs (c) Co-ordination of civil and military purchases and (d) food production on an All India Basis.

In the month of July 1943, the Food Grains Policy Committee was set up which recommended the following measures.²³

1. Exports of food grains should be totally stopped.

2. Imported food grains should be stored in the Central Food Grains Reserve which was averaged at 1.5 million tons.

3. Procurement machinery should be set up.

4. Movement of food materials must be given top priority.

5. Rationing should be introduced in cities with a population of 1 lakh and over.

6. Anti—hoarding measures should be adopted.

Grow More Food Campaign should be launched.

The Government of India accepted all

these recommendations.

The food policy of the Government can be studied under two stages. The first stage of Grow More Food Campaign from 1943 to 1947 and the second stage- the Five Year Food Plan from 1947 to 1952.

Under the Grow More Food Campaign the following measures were adopted.²⁴

- (1) Increase in the cultivated area by bringing fallow and waste land under the plough.
- (2) Increase in the irrigational facilities.
- (3) Extended use of fertilizers and manures.
- (4) Increased supply of improved seeds.

The Grow More Food Campaign was to be conducted by the various states with the help of Government of India subsidies or grants on 50-50 basis i.e. the Central Government provided an equal amount of money incurred on such items by a state. This Campaign in its early stage consisted of adhoc schemes and was not placed on a planned footing until 1947 in which year definite targets for increased production of food for various states

were fixed. ²⁵

Soon after the assumption of office by Shri K. M. Munshi, the Government adopted a programme of integrated production to achieve self-sufficiency in food grains, cotton and jute. It was decided that imports would cease after march 31, 1952 and the deficit would be about 5.3 million tons per year.

Under this plan the achievement is as follows. ²⁶

In 1948-49 over the previous year 7.95 lakh tons					
„ 1949-50	„	„	„	9.49	„
„ 1950-51	„	„	„	17.00	„
Total				<u>34.44</u>	

The desired balance of 13 lakh tons will be achieved in 1951-52.

Reclamation of Land.

In order to achieve this aim about 7 or 8 lakh acres of land is to be reclaimed. Government provides financial aid to the cultivators for this purpose. But the curtailments of funds at the centre and the states

25. Govt. of India Publication-Self Sufficiency Plan
Page 7.

26. Ibid Page 8.

or financial stringency sometimes reduces the quantum of enthusiasm. In the Indian Union according to the Agricultural Statistics, there are 80 to 90 million acres of cultivable waste land. Such land is some-where covered with tall grass or scrub jungles. 1300000 acres of such land are to be reclaimed in the first instance. Of this total, 30000 acres has been reclaimed in Ganga Khadar and Nainital Tarai area with sufficiently encouraging results. Within the next three years the remaining land has got to be reclaimed. In many areas this land is capable of producing double crops. There is another type of cultivable waste land infested with deep-rooted weeds or kans grass. It is about 10 million acres mostly in Southern U. P., Madhya Bharat, Bhopal and Vindhya Pradesh.

A scheme launched by the Govt. envisages reclamation of 3 million acres of such land within the next seven years.

During 1949—50, 574000 acres were reclaimed with an additional production of food grains of 137000 tons.

During 1950-51, 239500 acres are to be

reclaimed including 25000 acres of jungle clearance.

During 1951-52, 280000 acres including 20000 acres of jungle clearance are to be reclaimed.

It has been estimated that within seven years, when 3 million acres of such land will be reclaimed, one million tons of food grains will be added to the total food supply.

Irrigation facilities.

For any scheme of additional food production provision of irrigational facilities is of paramount importance. India has 74 million acres of irrigated area. Of this land about 17 million acres are irrigated by canals and the rest by tanks and wells. Multi-purpose irrigation projects will take a long time to complete. The present scheme requires quicker means of irrigation by constructing wells, tanks and channels and repairing old ones.

It is also a point to note than unlike in the large systems of irrigation the problem with minor irrigation works is not primarily one of extension and development, but the very urgent one of conservation and maintenance,

prevention of retrogression and the restoration of works to a certain minimum standard of efficiency, for minor irrigation has a productive as well as protective value. The importance of minor irrigation works was brought to light by the Famine Commission of 1880.²⁷

During the period 1943 to 1947, 45549 new wells were constructed and 18668 old ones were repaired. During 1947-49 new wells constructed numbered 16800 and old ones repaired 16200. In 1950 upto June 74900 new wells had been constructed and 22200 repaired. For providing more facilities in drawing water from the wells, pumping sets have been supplied to farmers at subsidized rates, particularly in Madras, Bombay, Bihar Saurashtra and Cooch States. By December 1950, 3471 water lifting appliances were installed at different places.²⁸

Tanks exist mostly in Madras. Under the

27. S. Y. Krishana Swami-Rural Problems in Madras Page 439.

28. Govt. of India Publication-Towards Self Sufficiency Page 12.

G. M. F. Scheme, the Central Government is paying half the expenditure incurred on the construction and repairs of tanks. The following figures indicate the rapid progress made in the construction and repairs of tanks.

Period	Tanks constructed	repaired
1943 to 1947	2339	813
1947 to Dec. 50	6743	4900

Where subsoil water is abundant, tube wells form another source of sufficient supply of water. In U. P. there are 2200 tube wells each irrigating about 400 acres of land. A contract for constructing 996 tube wells has been recently finalised as follows:—

U. P.	Bihar	Punjab
440	300	256.

The Central Government have sanctioned a loan of Rs. 70 lakhs towards the cost of construction of 400 tube wells in Bombay State. They are to be completed by the end of 1951.

Improved seeds.

One of the surest methods of increasing

food production is the use of improved seeds. Improved seeds increase the produce by about 15%. The Grow More Food Campaign attaches great importance to schemes of seed multiplication and distribution. The Central Govt. has given financial aid to the various State Governments for launching schemes of seed multiplication and their distribution. During 1949-50 the Central Govt. sanctioned Rs 350000 for such schemes in eight states including Mysore, Bihar, Himachal Pradesh and Pepsu. According to the recent estimates the percentage of acreage under improved seeds ranges between 1.2% and 9.7%. In Madhya Pradesh and Madras, the area under improved seeds is 22.7 per cent and 23.2 per cent. respectively. Under this plan 1.25 maunds of improved seeds are expected every year. By the end of 1952, U. P- Bombay Bihar, Madhya Pradesh expect an increase in the supply of seed by 250 per cent. To ensure a proper working of the said scheme, a Central Seed Pool has been created which supplies seeds to the deficit areas. During 1949-50 seeds were

distributed in the following manner:-³⁰

1. Paddy seed...	21560 Maunds
2. Jowar...	22300 „
3. Wheat...	41000 „
4. Green manure	40461 „
5. Barley seed	400 „
6. Groundnut seed	1600 „
7. Bajra.	5030 „

In all about 132351 maunds of improved seeds were distributed among the various states during the year 1949-50.

Along with the distribution of improved seeds their multiplication is also important. The Central Government have advised the State Governments to see that the farmers multiply whatever quantity of improved seeds they get from the Government stores. If carefully adopted, one maund of improved wheat seed will increase to about 10000 maunds after five years. It calls for a very careful selection of the best plants for seed purposes. The seeds which are meant for further multiplication and improvement, should not be domestically used.

Fertilizers and Manures.

Next in importance to irrigation facilities and the use of improved seeds are fertilizers and manures. Their proper use according to Dr. Burns increases food production by 20 per cent³¹ but according to the publication of the Central Ministry of Information in some cases this increase is visible by 50 per cent.

The Royal Commission on Indian Agriculture pointed out the possibilities of improvement and observed, "The Indian cultivator has much to learn from the Chinese and the Japanese cultivator in regard to the manufacture of compost. Artificial fertilisers are used as little in China as they are in India, but there is no organic refuse of any kind in that country which does not find its way back to the fields as a fertilizer."³²

In recent years demand for fertilizers and manures has tremendously increased. The most popular fertilizer is "Sulphate of Ammonia" of which India produces about 60000 tons a year. The largest producers of this fertilizer

31. Dr. Burns-Agricultural Development in India.

32 Royal Commission on Indian Agr. Para 183.

are U. S. A., Canada, and Belgium. India has been importing Ammonium Sulphate-about 150000 tons per year on the average. The International control of its supply ceased on July 1, 1949 and so India could be able to import 403235 tons during the year 1950. Below is given a table of statement showing the allocation of Ammonium Sulphate to the various states. in 1950.

State	In tons.
Part A	290744
Part B	31300
Part C	995
Malwa Development Plan	2000
Total	<u>325039</u>

Besides this 141075 tons of Sulphate of Ammonia have been allocated for commercial crops, as given below. "

		tons.
Sugar cane.	46500	
Tea	40000	"
Cotton	20000	"
Coffee	5325	"
U. P. A. S. I.	8000	"
Jute	15000	"
Industrial purposes	6250	"

India has been steadily increasing the use of this fertilizer for food crops which is evident from the following figures:-³⁴

1944-45	59596	Tons.
1945-46	149562	"
1946-47	151186	"
1947-48	109659	"
1948-49	149249	"
1950	325039	"

The Sindri Fertilizer Factory (Bihar) established at the cost of 23 crores of rupees started working on Deepawali day 1951. It is expected to produce 175000 tons per year and by the end of 1952 it will be able to produce 350000 tons per year. India requires 500000 tons of fertilizers every year. Out of the imported stock 133886 tons of fertilizer and 89807 tons of oil cakes were distributed to cultivators by the end of March 1951.

Bone meals and Blood meals are very productive manures although in our country they are used to a limited extent only. Green manuring has been advised by the most progressive farmers of the world. The Government of India are encouraging its use by its free distribution among the cultivators. Green

34. Govt. of India Publication-Towards Self-Sufficiency Page 20.

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manuring is advisable in areas where water supply is abundant. From the experience of the farmers of other countries, the Indian farmer has now begun to understand its utility not for maintaining the fertility of soil only but also for increasing the yield per acre. "It is only in Madras, the United Provinces, Orissa & the Punjab that green manuring has been actively encouraged. In Madras the amount of green manure seed distributed is increasing and has now reached a figure of between 30000 and 40000 maunds a year. In the united Provinces distribution has been at the rate of 40000 maunds annually."³⁵

Compost.

The present supplies of fertilizers in India including imports provide about 50000 tons of nitrogen and about "2 million tons are wasted through improper conservation and incomplete utilization of human and cattle wastes in urban and rural areas." Compost is prepared from rubbish, refuse mixed with cattle dung, urine, and human excreta. Due to its proper application Japan and China are

35. Report of the Famine Enquiry Commission 1949
Page 17.

getting higher yields per acre than India. In China the average yield per acre of paddy before 1939 was 2433 lbs and in Japan it was 3444 lbs whereas in India it was only 1240 lbs. per acre yield of wheat in China and Japan are 989 and 1713 lbs respectively as against 660 lbs in India. The main reason of this increase in yields in China and Japan is that the farmers of these countries, do not have any prejudice against handling human excreta. They unhesitatingly use it on their fields. The cattle population of India is 200 millions. If their urine is collected in pits, about 3 million tons of nitrogen will be added to the soil. 50% of animal dung is used by Indians as fuel. This should be saved and used on the fields. For fuel supply the Government is distributing seedlings of quick growing trees free of cost.

It has been estimated that about 500 lakh tons of good manure can be produced in villages only. The composting of human waste in the villages will improve sanitation and help in the increased production of food.

In cities sewage and sludge should be conserved and sent to the nearby holdings. It

is estimated that all cities in India (where there is sewage system) provide about 500 million gallons of sewage and 2 lakh tons of sludge per day. The sewage waste of Poona, Delhi, Kanpur, Lucknow, Allahabad and Hyderabad etc. is being used as manure. Out of 2250 lakh tons of compost available in India only 57 lakh tons are utilized. The Union Government has advised the State Governments to increase compost production. The Governments of U. P., Bombay, Mysore, Hyderabad, Bihar, Punjab and Madhya Pradesh have passed laws compelling the municipalities to convert their refuse into manure. Other states like Rajasthan, West Bengal, Saurashtra etc are considering enactment of such legislations.

On account of all these measures, the development in the preparation of compost both in towns and villages made rapid progress which is evident from the following table:—³⁶

36. Govt. of India Publication-Towards Self-Sufficiency Page 26.

Year	Compost from town refuse (in tons)	Compost from Village (refuse (in tons)	Total
1944-45	182610	210000	392610
1945-46	282670	520000	802670
1946-47	409360	829000	1238360
1947-48	486080	1258986	1745066
1948-49	721257	2765944	3487201
1949-50	1016060	4000000	5016060

With the application of 5016060 tons of compost manure during 1949-50, food production was increased by nearly 200000 tons. The Government has fixed a target of compost production in urban and rural areas both for 1950-51 at 15,668960 tons. The All India Compost Development Committee guides villagers in its preparation, with technical and financial assistance.

Land Improvement.

Land improvement devices add to the productive capacity of the land by increasing its fertility. Under this scheme are included soil conservation, reclamation of saline land, clearance of marshy land, mechanical cultivation, bunding and terracing of areas which are subject to soil erosion. Water channels are necessary for clearing marshy lands.

Bombay has contour-bunded about 400000 acres in Dharwar. Bijapur and Sholapur districts and has set up a committee for reclaiming "Khar" and "Khajan" lands.

Sir Harold Glover has estimated that about one third of cultivated area in India is under soil erosion. In U. S. A. loss due to soil erosion is about $\frac{1}{2}$ million acres. For India no correct estimate could be made but this much is sure that it is considerable. Afforestation helps in checking soil erosion to a great extent.

Plant Protection

All such schemes of increased food production will have no far-reaching effects without plant protection. About 20% crops are damaged every year due to plant diseases. The Directorate of Plant Protection has adopted the following three measures for this purpose.

(a) Protection from diseases (b) Protection from pests and (c) Protection from wild animals.

During recent years diseases like "wheat rust" and "Leaf-spot" have caused considerable loss to the Indian crops. Pests like locusts and grass hoppers are another source

of trouble. Locusts Control Stations situated in Rajasthan keep watch on their movement and inform other State Governments accordingly. Due to influx of locusts from Bahawalpur and Khairpur States in Pakistan, locust population in India increased threatening economic prosperity of the country. In 1949, 490000 adult locusts were killed and 18000 bushes infested with them burnt. Crops should be protected from wild animals also. Gun licenses should be given to the agriculturists for this purpose. The Government encourages farmers to form gun clubs. Hired Shikaris will not be of great help. During 1950-51 the Central Government sanctioned Rs. 2274945 for plant protection.³⁷

A large quantity of food grains is destroyed every year in godowns due to rats and rodents. Scientific storage is very expensive for individual farmers. This work may be undertaken by the Farmers' Cooperative Societies with the financial assistance of the Government. Scientific storage facilities should exist in villages as well as in mandis.

Supply of materials.

The materials essential for increasing food production are (1) iron and steel (2) cement (3) coal for burning bricks and fuel oils. In September 1948, the Government set up a Supply and Coordination Section. The Ministry of Agriculture arranged for a separate allocation of iron and steel for agricultural implements. Top priority has been given to the supply of cement and slack-coal for sinking tube wells and other irrigation projects. Total demand for cement per quarter is 100000 tons. The Government is supplying 85% of this requirement.³⁸ The demand for slack-coal is 50000 tons which is supplied in full. Transport facilities on the railways have also been provided. The Grow More Food Scheme receives preference in respect of supply of wagons.

Financial help.

Grow More Food Campaign will not be successful if cheap credit facilities are not provided to the farmers. Until recently financial assistance in the form of loans and grants

38. Government of India Publication. Towards Self-Sufficiency Page 37.

was given by the Central Government to the part A States only but the same facilities have now been extended to Part B. C. and D States as well.

Applications for loans are received by the Tehsildar or the Agricultural Officers. Loans are sanctioned after verification of the facts and if arrears are not outstanding in the name of the applicant. The Government has instructed the officers that unreasonable delay should not occur in granting Taccavi loans to the needy cultivators. The interval between the submission of the application for the Taccavi loans and payment of the loan should not exceed one month.

Subsidies are granted where a particular scheme is not productive or the farmers are not conversant with a particular method of production. Green manuring, multiplication of seeds, land improvement and composting are some of the examples for which the Government of India grants subsidiers.

The Central Government has been giving food procurement bonuses to the various States at the rate of -/8/- per maund of food-

grains procured from the farmers and another -/8/- per maund for the food grains exported from the state under the Basic Plan of the Government. The amount of loans earned by a state is available for financing the Food Production Plan of the State.

The administrative organisation should be very efficient. Prizes and propaganda are the best way for inducing cultivators to make efforts to produce more. For the last four years the U. P. Government has been organising Crop Competition in potatoes. On December 19 (1951) the Central Government awarded the title of 'Krishi Pandit' and a prize of Rs. 1000/- each to three farmers.

(1) Shri Gounder (Madras) (2) Shri Madho Kripal (U. P.) (3) Shri Padam Singh (U. P.) for making outstanding contribution to the cause of Indian Agriculture,³⁹

Personal efforts.

During the World War, Great Britain made sincere efforts to step up her food production. Thousands of flower farms were turned into flourishing vegetable fields. Spades were thrust into carefully tended lawns for food

39. Amrit Bazar Patrika dated December 23, 1951.

production. Thus every inch of available land was utilized to grow more food. India's Food and Agriculture Minister Shri K. M. Munshi once said, "He who has land but cultivates it not, is a criminal." He advised people living in bungalows and kothis to grow vegetables and other commodities on their land. It is very gratifying to note that people are following his sane advice.

The All India Women's Food Council has suggested economy in the consumption of pulses which should be substituted by vegetables. Miss-a-meal Scheme does not seem to be successful.

Population Planning.

Along with such schemes of food planning population planning is equally important. Population should not exceed the optimum point. There have arisen controversies regarding the optimum population of India. There is no question here-whether or not India is over populated. It is admitted on all hands that the present population of India has outstripped the means of subsistence. Hence the necessity of family planning. During Novem-

ber and December 1951 Dr. Abraham Stove, an expert on family Planning, came to India, visited several places and suggested practicable ways of limiting families. Professor P. K. Whelpton, till recently Director of the Population Division of the U. N. O. has arrived here to work out a suitable plan of population. He is working in Mysore State in collaboration with the Government of India.

During the last decade Indian population increased by 12.6% and in some southern States like Travancore and Cochin rate of increase was by 13.4% According to a recent estimate of Dr. S. Chandra Shekhar of Baroda University, Indian population increases by 4 million people per year. This is an alarming figure. We have also to consider food supply, malnutrition, hunger and starvation along with the increasing numbers.

New Grow More Food Scheme.

Under the new G. M. F. Scheme, the Central Ministry of Food and Agriculture has asked each State Government to indicate areas where they can have intensive cultivation with maximum supply of seed and manure. For the year 1951-52 the West Bengal Govt.

has intimated 26 blocks for intensive cultivation with a total area of 825000 acres which would give an additional crop of 243900 tons of food grains. The West Bengal Govt. has been sanctioned a loan of Rs. 42,14000 and a grant of Rs. 3021100 for the year 1951-52.

The U. P. Government has intimated 50 blocks of land totalling 678000 acres for intensive cultivation which would give an additional yield of 282000 tons of food grains during 1951-52⁴⁰.

Five Year Plan and Food Production.

The Five Year Plan clearly appreciates the seriousness of the food problem which is to be studied under five sets of factors (1) the over all requirements of the people (2) The extent of rationing commitments (3) the extent to which internal supplies of grains can be procured (4) The magnitude of imports (5) Prospects of increasing internal production.

Estimated population	- 1950	— 357.4 Millions
„ population	- 1956	-- 383.1 „
„ Adult population.	1950	-- 307.4 „
„ „ „	1956	— 329.5 „
Production of cereals	1950	455.2 Lakh tons

Quantity available for consumption including imports in 1950.....427.9 Lakh tons.⁴¹

If 13.67 ounces per day per adult is available in 1956 the total requirement for consumption will be 524.24 lakh tons and the deficit at the present level of production will be 69.04 lakh tons. In other words, India will need an additional quantity of food grains to the tune of 7 million tons in 1956. The plan says that each area should supply the maximum surplus to the deficit area for distribution. It lays stress on the rationing and procurement schemes of the Government. In view of the plan, the essential objective of the food policy can be secured if only the big towns are rationed with the help of the food grains imported. The restoration of a free market would tend to bring down prices of food grains but where controls are efficiently managed there will not be much difference between the prices obtaining in rationed and non-rationed areas. In the opinion of this plan difficulties experienced on account of food shortage can be removed if effective anti

smuggling measures are adopted. Imports should also be planned. It is necessary to ensure that within the next few years imports should not fall below 3 million tons per year but when needed, they may be increased.

The plan has presented a programme for securing an additional production of food grains to the extent of 7.2 million tons by 1955-56. It says that the declaration which was made in 1949, that India would become self sufficient in food in 1951 was a wrong assumption because all the additional quantities were not to be available to the Government for distribution in cities. A major portion is also expected to be purchased by the non-producing population abiding in the villages. Anyway the procurement policy should be extended. The plan has suggested that agricultural holdings above a prescribed size should be converted into Registered Farms and cultivation on these farms should be carried on according to the programme of the Malwa Development Board.

The five year plan criticizes the Grow More Food Campaign saying "It is clear, nevertheless, that Government's effort in the

G. M. F. Campaign has been widely dispersed and that frequently it has taken the form of rendering assistance to scattered individual farmers rather than of programmes conceived and operated in terms of specified areas in which intensive work effecting every farmer and every acre of land was undertaken.”⁴²

According to the plan 137 crores of rupees are to be spent on agriculture in the first five years. The targets fixed for the various States to be achieved by the end of 1955-56 are as follows:—⁴³

State	Additional Food Production in thousand tons.
Assam	311
Bihar	879
Bombay	367
Madhya Pradesh.	347
Madras	834
Orissa	295
Punjab	650
U. P.	800
West Bengal	797
Hyderabad	633

42. Five Year Plan Page 78.

43. Five Year Plan Page 80.

Madhya Bharat	300
Mysore	159
Pepsu	249
Rajasthan	86
Saurashtra	94
Travancore Cochin	141
Other States	260

Grand Total. 7202

This additional production of food grains will be achieved through the different types of measures as enumerated below:-

Thousand tons.

Through Major Irrigation projects.	2272	„
„ minor „ „	1932	„
„ Cultivation of fallow land)		
Central Tractor Organisation)	1524	„
Land Improvement Schemes)		
Manure and Fertilizer Schemes	584	„
Seed Distribution Schemes.	370	„
Other Schemes.	520	„
Total	<u>7202</u>	

Under the plan, Village Production Councils are to be formed and the promotion of high yielding crops is considered to be one of their duties. This council, according to the plan, is expected to:-

(1) Frame programmes of production to be achieved at each harvest.

(2) Frame budgets of requirements of supplies and finance needed.

(3) Assess the results attained at each harvest.

(4) Act as a channel for government help.

(5) Adopt measures to bring cultivated land under the plough.

(6) Assist in securing the minimum standards of tillage.

(7) Assist in the procurement and sale of surplus food grains. Credit facilities, according to the recommendation of the plan, are to be extended to individual farmers or the village as a whole, through the Co-operative Societies, Farmers' Associations or village Production Councils. The plan further lays down, "where the necessary co-operative machinery does not exist, we suggest that co-operative multi-purpose societies for groups of ten villages may be established in areas earmarked for intensive development."⁴⁴

The plan has also suggested machinery for immediate action in regard to increasing agricultural production.

It consists of three main proposals.

(1) Establishment of Village Production Councils and (2) Establishment of Registered Farms. and (3) Promotion of Co-operative Farming Societies.

The plan lays great stress on the consolidation of agricultural holdings as a measure of increasing food production but regrets to say that it is not a lasting solution as it fails in eliminating the essential weaknesses of the uneconomic holdings. For the achievement of this aim, it suggests the organisation of the cooperative village managements under which programmes for consolidation of holdings will be intensified.

Thus we find that the Five Year Plan has suggested a good many schemes which if worked out, will surely tend to increase food production.

World Food Reserve.

The Indian delegate to the U. N. Economic Committee, Shri P. A. Narielwala asked the Committee to support a plan for Interna-

tional Food Reserve from which supplies could be rushed to famine-areas. If the exporting countries started setting something aside, in five years there would be substantial stock of food grains. Buffer stocks might be financed by the International Ban.

The Joint American-Chilian resolution has recommended world cooperation to boost food production and establishment of International machinery to meet emergency famines.⁴⁵

If these recommendations are implemented, India will get extra food stuffs from this reserve.

By way of recapitulation it may be said that although Senator Taft (U. S. A.) characterised Indian Food Shortage as a "Chronic Disease," and Dr. W. Koster, Leader of the World Bank's Mission to India expressed his view that it could not be possible for India to be self-sufficient in food for some years to come,⁴⁶ the intensified programme of the Grow More Food Campaign has met with some remarkable success. Working on the Five Year Plan, with the cooperation of the public

45. Amrit Bazar Patrika 17th. Jan, 1951.

46. Amrit Bazar Patrika dated Dec. 22, 1951.

and efficient organisation, we ardently hope, India will be able, within a limited span of time, to free herself from the miseries of food shortage.

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